

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
DESIGN-BUILD PILOT PROJECT EVALUATION:  
A MEASUREMENT OF PERFORMANCE FOR THE  
PROCESS, COST, TIME, AND QUALITY



SR500 THURSTON WAY INTERCHANGE

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### ***Cost of Warranty***

This was the first experience with an asphalt pavement warranty for WSDOT and the Northwest paving industry on either a design-build or design-bid-build project. WSDOT decided early in the process to require an asphalt warranty to mitigate the risk of not performing the final pavement design in-house. WSDOT undoubtedly paid additional money for requiring a five-year pavement warranty on this project, however, the final cost is extremely difficult to determine due to the proprietary nature of the pricing for the warranty. Although personnel interviewed from WSDOT stated that the warranty was intended to ensure the quality of standard design and construction practices, the design-builder interviewee's stated that the warranty requirements were in excess of standard practice. The design-builder stated that the warranty added both design and construction liability, and they in turn priced this liability into their bid. Although it was not clear how the design-builder bid the warranty, one of the unsuccessful proposers stated that they bid a complete asphalt overlay at the end of the five-year warranty to protect themselves from the liability. This pavement overlay would certainly not be expected on a non-warranty project. The reason for this excessive bid cost is a combination of WSDOT specifications and apprehension from the industry on this new contract method.

One easily identifiable cost associated with the warranty is the warranty bond, which WSDOT required. The design-builder included \$50,000 for the product warranties in the schedule of values. WSDOT required that a bond be supplied by the design-builder for the duration of the warranty period to pay for the associated warranty repair costs if the design-builder was not financially able to pay for the repairs under the terms of the warranty.

Asphalt pavement warranties are relatively new on a national scale. The Wisconsin DOT has obtained excellent results and cost performance with their program (WisDOT 1997) while the Colorado DOT has realized only equal performance with slightly increased costs (CDOT 2001). WSDOT will need to make a decision about the future use of asphalt pavement warranties and measure its performance on a long-term basis before any substantial conclusions can be made.

### ***Quality Impacts of Warranties***

Given the stringent QA/QC plan for pavements, the project team did not believe that the warranty provisions improved the quality of the pavement. If a warranty is used in the future, WSDOT should rely on the warranty to provide the quality assurance and not require such stringent QA/QC measures. It is also suggested that WSDOT clarify the point at which the warranty period begins in the contract.

### ***Use of Warranties***

Another area of concern relates to the use of warranties. In the Thurston Way Interchange pilot project, feedback from the proposing design-builders indicates that the 5-year pavement warranty outlined in the RFP was achieved by at least one of the design-builders through including the cost of an overlay at the end of 5 years. This is very expensive for WSDOT as the design-builders had to assume a cost of asphalt in five years and bid the overlay whether it will be required or not.

- WSDOT should reconsider the use of warranties in conjunction with design-build. It is the evaluation team's recommendation that WSDOT experiment with warranties separately. Once WSDOT is satisfied with the use of warranties on their own merit, only then should they consider combining this practice with the design-build process.